



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,299	06/05/2006	Shigeki Miura	0033-1001PUS1	1005

2292	7590	06/29/2007
BIRCH STEWART KOLASCH & BIRCH		
PO BOX 747		
FALLS CHURCH, VA 22040-0747		

EXAMINER	
LAVILLA, MICHAEL E	

ART UNIT	PAPER NUMBER
1775	

NOTIFICATION DATE	DELIVERY MODE
06/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/532,299

Applicant(s)

MIURA, SHIGEKI

Examiner

Michael La Villa

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050422, 20061122</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claims 1-3, it is unclear whether the phrases “formed by” and “formed with” constitute product-by-process language, or not.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
6. A person shall be entitled to a patent unless –
7. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kusama et al. JP 2000-212726. Kusama et al. teaches aluminum foil of the claimed thickness of Claim 2 that is laminated on one side with polymer, wherein the other side is coated with deposited copper layer of 1 nm thickness and another copper layer of 50 nm thickness. See Kusama et al. (Abstract; paragraphs 14, 17, 20, and 26-29).
9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Poutasse et al. USPA 2001/0015257. Poutasse et al. teaches that metal foil may be

coated with barrier metal layer and stabilization metal layer, wherein the metal foil may be comprised of aluminum of the claimed thickness of Claim 2, wherein the barrier metal layer may have the claimed thickness of the metal layer of Claim 1, wherein the barrier metal layer may be Cu, and wherein the metal foil may be bonded to polymer film. The barrier metal layer of Poutasse is identified with the claimed stabilization layer, and the stabilization metal layer of Poutasse is identified with the claimed plating layer. Poutasse does not teach a specific method for making the barrier metal layer, but it would be expected to include a deposition method as claimed. See Poutasse et al. (paragraphs 12, 20-23, and 49-52).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Poutasse et al. USPA 2001/0015257. Poutasse et al. teaches that metal foil may be coated with barrier metal layer and stabilization metal layer, wherein the metal foil may be comprised of aluminum of the claimed thickness of Claim 2, wherein the barrier metal layer may have the claimed thickness of the metal layer of Claim 1, wherein the barrier metal layer may be Cu, and wherein the metal foil may be bonded to polymer film. The barrier metal layer of Poutasse is identified with the claimed stabilization layer, and the stabilization metal layer of Poutasse is identified with the claimed plating layer. Poutasse does not teach a specific method for making the barrier metal layer, but it would be expected to include a deposition method as claimed. See Poutasse et al. (paragraphs 12, 20-23, and 49-52). Poutasse et al. may not exemplify the claimed laminate structures, but suggests effective laminates that are encompassed by those claimed. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the laminates of Poutasse in the manner suggested by Poutasse in order to form effective laminates, including those that are encompassed by the claims.

Claim Rejections - 35 USC § 102/103

13. Claims 1-4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the


alternative, under 35 U.S.C. 103(a) as obvious over Poutasse et al. USPA 2001/0015257. Poutasse et al. teaches that metal foil may be coated with barrier metal layer and stabilization metal layer, wherein the metal foil may be comprised

of aluminum of the claimed thickness of Claim 2, wherein the barrier metal layer may have the claimed thickness of the metal layer of Claim 1, wherein the barrier metal layer may be Cu, and wherein the metal foil may be bonded to polymer film. The barrier metal layer of Poutasse is identified with the claimed stabilization layer, and the stabilization metal layer of Poutasse is identified with the claimed plating layer. Poutasse does not teach a specific method for making the barrier metal layer, but it would be expected to include a deposition method as claimed. See Poutasse et al. (paragraphs 12, 20-23, and 49-52). In the event that the claimed product-by-process limitations differ from the methods used by Poutasse, the resulting metal films would be expected to be identical to or substantially identical to those claimed with product-by-process limitations, since both the films of Poutasse and those claimed are comprised of metal and since applicant has not demonstrated that any distinguishing structural or compositional property necessarily results from the claimed product-by-process limitations. With respect to the claim limitations unrelated to product-by-process limitations, Poutasse et al. arguably may not exemplify the claimed laminate structures, but suggests effective laminates that are encompassed by those claimed. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the laminates of Poutasse in the manner suggested by Poutasse in order to form effective laminates, including those that are encompassed by the claims.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
20 June 2007


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER